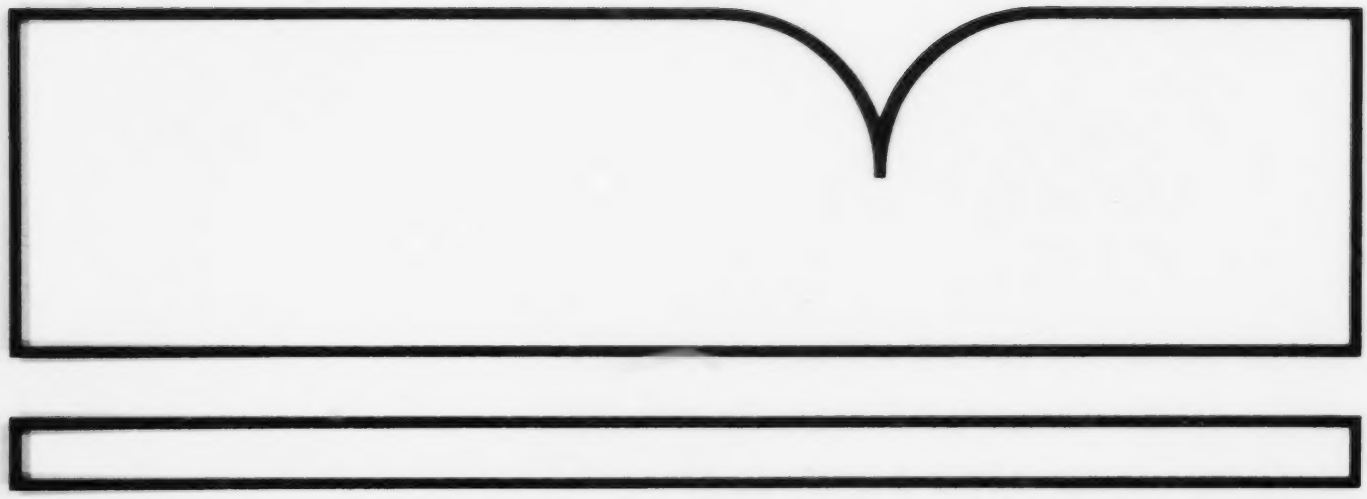
PB87-191888

Superfund Record of Decision (EPA Region 3)
Middletown Road Site
Annapolis, Maryland, March 1986

(U.S.) Environmental Protection Agency
Washington, DC

17 Mar 86



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United States
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Agency

Office of
Emergency and
Remedial Response

EPA/ROD/R03-86/021
March 1986

EPA

Superfund Record of Decision:

Middletown Road, MD

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16. ABSTRACT

The Middletown Road Site is a privately owned waste dump, consisting of approximately 2.3 acres, located off Maryland Route 50 near Annapolis, Anne Arundel County, Maryland. The site operated as a dump, primarily for rubble and construction debris, for several decades without proper State permits. In 1981, it was discovered that approximately 40 drums and four dumpster loads of suspected hazardous substances were on the site.

On June 24, 1983, $384,000 in CERCLA money was allocated for immediate removal measures to excavate and remove hazardous substances and contaminated soil. The removal activities conducted at the site consisted of: the removal of contaminated soil and 5-gallon pails of marine paint; additional soil sampling to confirm adequate contaminant removal; installation of six ground water monitoring wells around the perimeter of the site; drum sampling, testing and the relocation of one million tires on the site in order to conduct a more comprehensive subsurface investigation. Material removed during the Immediate Removal Action included 68 drums, 70 contaminated tires, and 610 tons of contaminated soil.

A remedial investigation was conducted to determine whether any remedial action would be needed before deleting the site from EPA's National Priorities List. Based on the findings of the RI, no risk to receptors via direct contact, inhalation, or ingestion was found. Therefore, a No Action Alternative has been recommended, since there are no
(See Attached Sheet)

17. KEY WORDS AND DOCUMENT ANALYSIS

a. DESCRIPTORS	b. IDENTIFIERS/OPEN ENDED TERMS	c. COSATI Field/Group
Record of Decision Middletown Road, MD Contaminated Media: None-no observed release Key contaminants: N/A		

18. DISTRIBUTION STATEMENT	19. SECURITY CLASS (This Report) None	21. NO. OF PAGES 38
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16. ABSTRACT (continued)

releases from the Middletown Road Site which may threaten public health. The State of Maryland will monitor onsite wells as a part of its existing closed waste site inspection schedule.

RECORD OF DECISION
REMEDIAL ALTERNATIVE SELECTION

Site: Middletown Road Site Annapolis, MD

Documents Reviewed

I am basing my decision primarily on the following documents describing the analysis of cost-effectiveness and extent of cleanup during the emergency action at the Middletown Road Site.

- Middletown Road Dump, Superfund Immediate Removal, FEDERAL ON-SCENE COORDINATORS REPORT.

- Middletown Road Site, Remedial Investigation 56-600-23-33 - Prepared by the Maryland Department of Health and Mental Hygiene, Waste Management Administration Support Services Division.

- Staff summaries and recommendations.

- Letter of concurance from State of Maryland, March 3, 1986.

Description of Selected Remedy

- No action with regard to remediation of site, as the Remedial Investigation has confirmed that the emergency action was complete, and there are no releases from the Middletown Road Site which may threaten public health.

- The State of Maryland to monitor onsite wells at as a part of its existing closed waste site inspection schedule.

Declarations

Consistent with the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA) and the National Contingency Plan (40 C.F.R. Part 300), I have determined that the "no-action" alternative combined with continued monitoring by the State of Maryland of onsite wells is a cost-effective remedy for the Middletown Road Site. Because of the extensive and thorough cleanup during the Emergency Removal Action, as indicated by the results of the Remedial Investigation, EPA, in consultation with the State, has determined that the site poses no significant threat to public health or the environment.

I have also determined that the action being taken is appropriate when balanced against the availability of Trust Fund monies for use at other sites. The "No Action" alternative in conjunction with ground water monitoring will adequately protect public health, welfare and the environment.

James M. Seif
Regional Administrator
Region III - USEPA

Date 3/17/86

ATTACHMENT

Attachment	1	Surface/Ground Water Sampling Results
Attachment	2	Metals Content of Site Soils
Attachment	3	Air Quality Study - June 28, 1985
Attachment	4	Middletown Road Site Map
Attachment	5	Community Relations/Fact Sheet Press Releases
Attachment	6	Operation and Maintenance

SUMMARY OF REMEDIAL ALTERNATIVE SELECTION
MIDDLETOWN ROAD SITE

I. Site History

The Middletown Road Site was an unregulated dump located off Maryland Route 50 near Annapolis, Anne Arundel County, Maryland. This location had been operating as a dump, primarily for rubble and construction debris for several decades without proper state permits. In 1981, it was discovered that approximately 40 drums and four dumpster loads of suspected hazardous materials were on the site. This site was placed on EPA's National Priority List (NPL) in December of 1982. The basis for this designation was the potential ground water and surface water contamination.

After being placed on the NPL, a site assessment was conducted in February, 1983, which revealed that emergency conditions were present. Site access was virtually unrestricted. When coupled with its proximity to a residential area and a day care center, a substantial threat existed via direct contact with toxic substances.

On June 24, 1983, $384,000.00 in CERCLA money was allocated for immediate removal measures at the site. These actions were conducted as a joint State of Maryland Department of Health and Mental Hygiene, Office of Enviromental Programs and US EPA Region III effort.

The immediate removal conducted at this site can be broken into several overlapping phases. The first phase was the mobilization of manpower, materials and equipment necessary to complete the project. An Extent-of-Contamination survey was conducted as a second phase and the removal of contaminated soil and 5-gallon pails of marine paint comprised the third phase of operations. Phase 3 included additional soil sampling to confirm adequate contaminant removal,installation six ground water monitoring wells around the perimeter of the site, and a subsurface magnetic survey.

The magnatometer survey revealed partially buried drums on the opposite side of the site, thereby opening the door for Phase IV. This phase consisted of drum sampling, testing and the relocation of one million tires from the site in order to conduct a more comprehensive subsurface investigation.

Phase 5 operations included removal of subsurface drums from the locations identified in Phase 4 as iron-containing zones. This was followed by operations to close out the project, including upgrading sediment control measures and demobilizing.

The total amounts of material removed during the immediate removal action were 68 drums, 70 contaminated tires and 610 tons of contaminated soil.

Remedial Investigation activities have been undertaken by the Maryland Department of Health and Mental Hygiene under a Cooperative Agreement signed on January 2, 1985 with the US EPA, Region III. The scope of work for the Remedial Investigation has consisted of data collection at the possible routes of contaminant escape at 6-week intervals to insure that there were no releases from Middletown Road which pose an environmental threat. The work plan, implemented by the State of Maryland Department of Health and Mental Hygiene, Office of Environmental Programs, consisted of four phases.

Phase I was an assessment of the water quality in the vicinity of the site. Data was collected from monitoring wells and surface water.

Phase II was an assessment of site soils and sediments of the site. Analysis was made for Priority Metals, Volatile Organics and Base/Neutral Extractables.

Phase III was an assessment of data generated by all prior phases and an overview of said data culminating in a recommendation for or against removal of the Middletown Road Site from the EPA's National Priorities List.

Based on the findings of the RI, no risk to receptors via direct contact, inhalation, or ingestion was found.

II. Site Location and Description

The Middletown Road Site is a waste dump located off Maryland Route 50 near Annapolis, Anne Arundel County, Maryland.

The Middletown Road site is situated in a slightly hilly area that was filled in to form a piece of relatively flat property. Two gravel roads off of Middletown Road provide access to the the site. Figure 1-A is a map showing the site location.

A. Geology and Soils

The Middletown Road site lies on an outcrop of the Aquia Formations deposited during the later Paleocene-early Eocene Epoche, approximately 50 to 55 million years ago. The Aquia consists of sands, which are clean to moderately clayey. The sands were laid down in very shallow marine waters.

The Aquia sands are usually well-sorted, medium-grained with a few areas where fine or coarse grains dominate. They are usually massive or thick-bedded, highly fossil ferrous, and are "glauconitic"; meaning that they include minerals of the mica group (K, Na), (Ar, Fe^{+3}, Mg)$_2$, (Al.Si)$_4$O$_{10}$ (OH)$_2$. Glauconitic sands are indicators of slow deposition and usually have a characteristic green color. Another name for the formation is Aquia Greensand. The thickness of the Aquia Greensand in this area is estimated at over 100 feet.

Terrace deposits laid down during the Pliocene (8 million years ago) outcrop in bands northeast and southewest of the site. These terrace deposits consist of interbedded sand, gravel and silt-clay.

The site lies in a small valley along the south bank of an unnamed tributary of Whitehall Creek. The valley slopes from 100 feet to 40 feet in less than 800 feet, a slope of approximately 7.5%. The valley extends mainly west to east before bending to the south along the stream course. There, the stream meets another tributary of Whitehall Creek flowing from the west to east.

B. Hydrology

The Middletown Road site lies within the drainage area for Whitehall Creek. Three of the five sizeable streams feeding Whitehall Creek drain the area surrounding the site. The site lies alongside the center of the three northern tributaries, on the southern wall of a west to east running valley. Running down the valley sides, the slope is approximately 10%. All surface runoff from the site is thought to flow into the center of the three northern feeder streams, and then into Whitehall Creek.

A wetland area begins less than 1200 feet downstream from the dump area and continues for approximately 4500 feet until Whitehall Creek widens. Net precipitation in the area is over 10" per year.

The Aquia Greensand on which the Middletown Road site lies, is one of the most important aquifers in southern Maryland and the Eastern Shore. Wells from the aquifer have yields ranging primarily from 2 to 1300 gallons per minute (GPM). The wells are used primarily for drinking water, although recently supplemental irrigation wells have begun to draw on the Aquia. The water is generally of good chemical quality and in many instances, may be used with little or no treatment.

There are 13 drinking water wells tapping the Aquia within two miles of the site; three of these are classified as public supply wells. Depths of the wells range from 53 feet below the 68 feet above sea level. Yields range from 30 GPM to 36 GPM.

Two of the public supply wells are less than 1500 feet north of the site. These wells are shallow (2 feet above, 16 feet below sea level) and have moderate yields (8 GPM, 12 GPM). The wells are owned by Colonial Manor Estates, and were drilled in 1959 and 1969, respectively. The stream lies between the well location and the site.

The permeability of the Aquia Greensand in the area is thought to be between 10^{-4} CM/S and 10^{-2} CM/S.

Groundwater flow is generally governed by site topography and moves toward the southeast. This is the opposite direction from the nearest public supply well. If contaminants were present and escaped from the site they would most away from drinkin likely flow in this direction away from public use.

During the emergency phase of the Middletown Road Project, six (6) ground water monitoring wells were installed by the State of Maryland at the site in locations designated to best monitor on or offsite migration of contaminants. Routine monitoring of these wells began in June of 1983 and has continued on a regular basis to date. The geographical layout of these wells is represented in Figure I-A Middletown Road Site Map." Results obtained from analysis of these samples have indicated that no contamination has been detected.

The ground water samples were analyzed by the State of Maryland's Department of Health and Mental Hygiene Laboratories using EPA approved methods. Parameters analyzed for included all priority metals, Volatile

Organic Pollutants, Base/Neutral Extractables, Pesticides and Basic inorganic and organic values (i.e.. pH, Conductivity, T-PO_4, NH_4, NO_2, Turbidity, Dissolved Solids, Alkalinity, Fe, COD, TO_6).

III. Sampling Investigation and Results

A. Soils and Sediments

During the emergency phase of the operation, extensive soil sampling was undertaken to determine extent of contamination of the site. Contaminated soils were removed from the site and transported to secure landfills located in Hawkins Point, Maryland and Coatesville, Pennsylvania.

Analysis of removed soils from the site indicated the presence of the following materials in levels up to the indicated maximums:

Contaminant	Concentration ppm
Lead	8,690.
Cr	76.6
Cyanide	1,000.
Arsenic	2.0
Zinc	73.5
Copper	10
Cadmium	0.13
Manganese	30
Barium	30
Boron	13
Aluminum	710

In addition to the contaminants listed above, certain other organic contaminants were identified onsite. They include phenolic compounds, chlorinated compounds and Base/Neutral Extractable Compounds in levels above standard detection limits by GC/MS verification.

Under the remedial phase of the project, soil sampling was again undertaken to determine the success of the emergency removal of contaminated soils. A 50' grid was laid out over the entire 2.3 acres of the site proper. Using random numbers generated by a computer, certain grids were chosen to be sampled. (See Figure III) Composite samples were obtained from each grid using standard methods of soil sampling as detailed in the EPA publication "Samples and Sampling Procedures for Hazardous Waste Streams." They were analyzed for metal and organic priority pollutants.

The results of these analyses were plotted aerially and analyzed statistically. The analysis of this data proved that there is no significant contamination at the site. The analytical results from soil samples taken from the areas where RCRA wastes and contaminated surface and subsurface soils were removed show that the remaining soils in these areas are comparable to the surrounding soils in the dump where construction debris, tires, and other trash had been deposited over the years. Additionally, the EP-Toxic tests showed that the soil did not exceed any of the RCRA EP-Toxics.

To confirm site cleanliness, a second soil sampling project was undertaken in mid-October 1985. Six soil samples were collected from various sections of the site at four points likely to have the highest concentration of contaminants; with two additional samples to serve as controls. These sample points may be referenced on Map 1 as BSS - 1 through BSS - 6. Results from this investigation confirmed lead and chrome levels found in previous background samplings and which typify Aquia Greensand soils. (See Attachment 2).

B. Surface Water Investigation

Site impacts on surface water have been topographically limited to an unnamed tributary of Whitehall Creek. There are two branches to this tributary which may be impacted, the confluence of these branches is located within the bounds of the site proper. One branch is fed by a spring which emanates from the site. The second branch is an intermittent stream flowing along the northern site perimeter.

Sampling of the surface water was initiated concurrently with the hydrogeological survey. The stream was sampled at the three points, at a point 100' from the spring head 1200 feet from the spring head and at the point where Route 50 crosses the stream 1/2 mile downstream from the site.

During the emergency phase of the operations, contamination was discovered in the vicinity of the spring head. This contamination had a tendency to dilute or attenuate at the 1200 foot station. This contamination however dissipated at the 1200 foot station and was shown to be at background levels during the Remedial Investigation samplings. Table 1-A in Appendix 1 gives the results of the sample analysis for the Middletown Road Site's unnamed tributary to Whitehall Creek.

An environmental assessment conducted in 1983 shortly after clean-up indicated that aquatic life was not impacted by the site. This conclusion was reached based on the presence of certain species which thrive only in unstressed environments.

The data for samples from the stream obtained after the emergency phase did indicate sporatic increases in heavy metals such as arsenic, lead and barium. Hence another sampling effort was launched. In late October and early November of 1985, an attempt was made to identify the source of the data anomoly. Samples were obtained from the site stream at S-1 as well as from a control stream at, S-4, unrelated to the site. A final comparison of this data showed however that the water quality in both streams was below the detectible limits set for the MCL during water standards. Only slightly higher Total Dissolved Solids (TSD) were found in the surface runoff from the Middletown site resulting from the flow off the poorly vegeta surface terraine which may be linked with the periodic data anomoly. Hence, it can be concluded that as a result of the emergency removal action, runoff from Middletown Road is of similar quality to that of surrounding waterways and poses no threat to aquatic life or public health.

C. Air Investigation

Ambient monitoring of airborne contaminants at the Middletown Road site was continous during the emergency phase. Except for several excursions of airborne pollutants resulting from disturbances of containerized materials, there was no problem with the air quality at the site. Several vents did, however, offgas methane and related landfill gases but analysis of air bag samples obtained from these vents indicated insignificant levels of chemical contaminants. Table 1-B in Attachment 3 and 4 shows the levels of airborn contaminants found during the emergency phase.

During the Remedial Investigation of the site, an air quality survey was conducted onsite. Readings were made at chest level (3.5') and at ground level (0.5') along several transects running through the site using the HNu photoionization detector. There were no readings above normal site background encountered on any of these transects. In addition to the site transects, several discrete readings were made around the site, particularly at the spring head and several vents that had previously given off organic readings. The results of these discrete samples were null.

D. Ground Water Monitoring Well Results

During the remedial investigation, ground water samples were taken and analyzed on six separate occasions for metals and once for volatile organics. The six (6) onsite wells (OW-1-6) were tested in addition to three (3) offsite domestic wells. Almost three years of sampling data from on and off-site monitoring wells indicates that ground water is within the safe drinking water levels and its' quality is not threatened by hazardous mater: which were present on-site prior to the removal action.
(See Attachment 1 for Lab Results)

IV. Community Relations

During the emergency action 3 public meetings were held. Two public meetings were conducted during the Remedial Investigation (RI). The second (RI) meeting was held to present the Remedial Investigation No Action Option on Aug. 27, 1985 and was not attended by the press or public. (See attached Fact Sheet and press release, Attachment 5)

V. Consistency with other Environmental Laws

During the emergency action at the Middletown Road dumpsite, all RCRA hazardous wastes and surrounding contaminated soils were removed and disposed of according to all appropriate State and federal laws. The Remedial Investigation further proved that the site is no longer an environmental threat as all air, water, soil and sediment samples were at or very close to naturally occuring background levels. The State of Maryland will monitor the on-site wells at least annually as a part of their existing closed waste site inspection schedule. (see Attachment 6)

The site is currently consistent with the Clean Air Act as no toxic airborn discharges have occurred on or offsite. Likewise, all ground and surface water data shows levels of metals and organics which are well within the Clean Water Act, Drinking Water standards. The site is also in compliance with all State environmental laws and regulations.

Presently. the Middletown Road property has only trash and tires onsite and is considered a solid-waste dump by the State of Maryland. It is not subject to RCRA regulations because all RCRA waste and contaminated soils were removed during the immediate removal action. Although RCRA is no longer applicable to this site the Maryland Solid Waste Regulations apply. Therefore, as discussed in the attached letter from the State of Maryland to EPA, (Attachment 6), the State has determined that the site is a closed solid waste dump and will be monitored in accordance with COMAR 1051 (Code of Maryland Register).

VI. Recommended Alternative

Thorough cleanup at the site and conformance with other environmental laws clearly indicates that the Middletown Road dump site is no longer an environmental threat. The tires remaining on-site are a solid waste problem that is regulated by Maryland's solid waste regulations. The State currently has issued a consent order with the owner to have them removed and properly disposed. A No Action alternative will be the most reasonable and lowest cost-effective alternative for protection of public health, welfare and the environment. Also,it is recommended that Middletown Road is proposed for deletion from the National Priorities List.

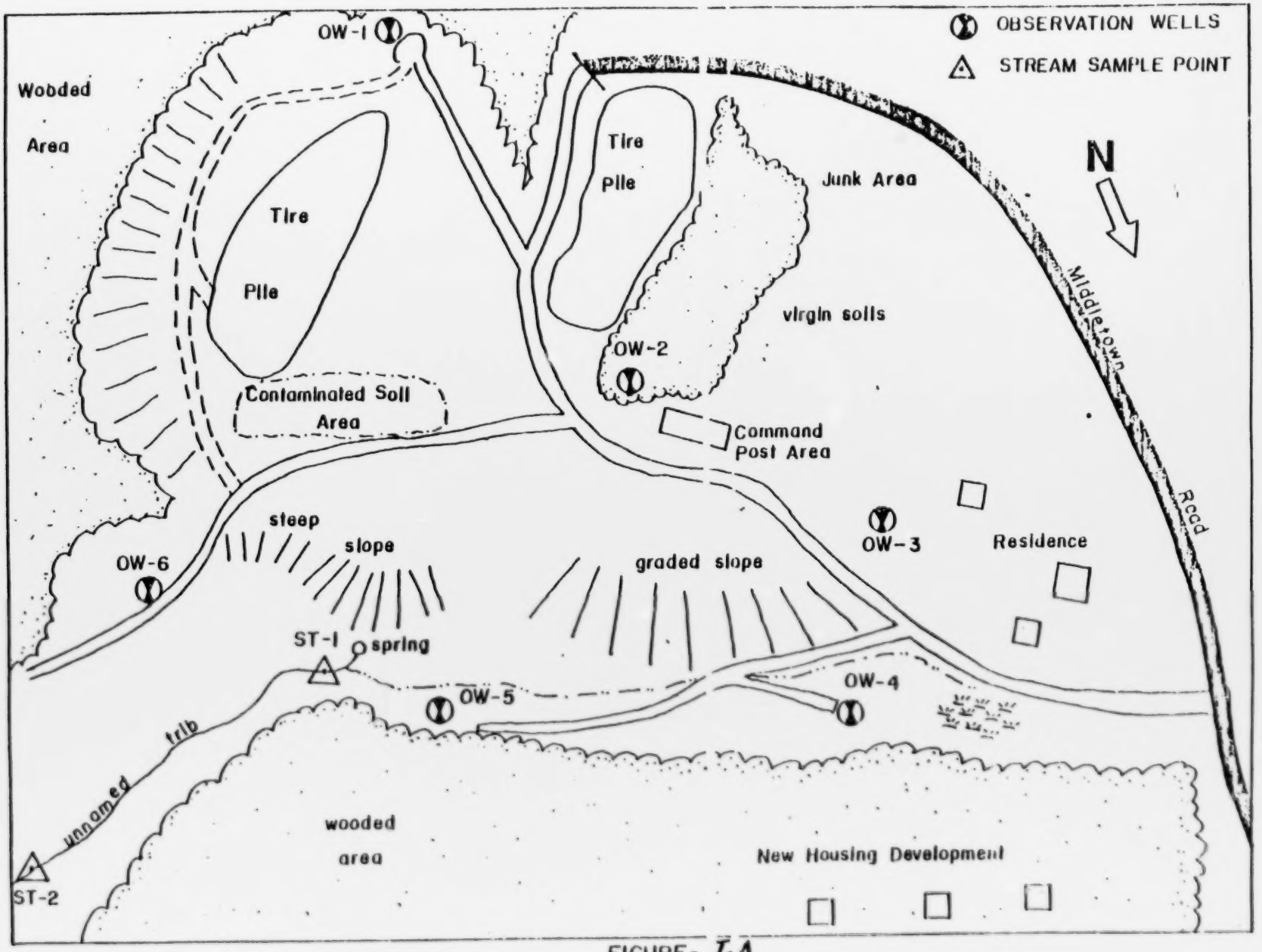

FIGURE- 1-4

Middletown Road Site - Annapolis, Md.
Site Sketch (not to scale)

MIDDLETOWN ROAD SITE
METALS DATA
FILTERED WATER SAMPLES

DATE	Oct. 17/85	Oct. 24/85	Oct. 24/85	Oct. 17/85				Oct. 24/85						Oct. 4/85	Oct. 4/85
SAMPLE POINT	OW1	OW2	OW3	OW4	OW5	OW6	OF-1	S-1	S-2	S-3	S-4	D-1	D-2	T-S	S-1
ARSENIC	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
BARIUM	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
CADMIUM	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005
CHROMIUM +6	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
CHROMIUM	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
LEAD	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
MERCURY	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
SELENIUM	0.001	0.004	0.005	0.003	0.002	0.01	0.001	0.005	0.002	0.004	0.005	0.003	0.003	0.003	0.003
SILVER	0.005	0.05	0.05	0.005	0.005	0.005	0.005	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
COPPER	—	0.05	0.05	—	—	—	—	0.05	0.05	0.05	0.05	0.05	0.05	—	—
MAGNESIUM	—	1.3	4.3	—	—	—	—	31	22	3.2	2.0	0.5	0.8	—	—
POTTASIUM	—	2.8	4.4	—	—	—	—	21	15	2.8	1.8	1.4	1.9	—	—

Summary of Volatile Organics Analysis on Ground Water Monitoring Wells at Middletown Road Site, Maryland, (Jan./Feb. 1985)

Purgeable Halocarbons (EPA 601)	Well #1	Well #2	Well #3	Well #4	Well #5	Well
Chloromethane	<1	<1	<1	*	*	*
Bromomethane	<1	<1	<1			
Dichlorodifluoromethane	<1	<1	<<			
Vinyl chloride	<1	<1	<1			
Chloroethane	<1	<1	<1			
Methylene chloride	<4	<1	<1			
Trichlorofluoromethane	<1	<1	<1			
1,1-Dichloroethene	<1	<1	<1			
1,1-Dichloroethane	<1	<1	<1			
trans-1,2-Dichloroethene	<1	<1	<1			
Chloroform	<1	<1	<1			
1,2-Dichloroethane	<1	<1	<1			
1,1,1-Trichloroethane	<1	<1	<1			
Carbon Tetrachloride	<1	<1	<1			
Bromodichloromethane	<1	<1	<1			
1,2-Dichtoropropane	<1	<1	<1			
trans-1,3-Dichloropropene	<1	<1	<1			
Trichloroethene	<1	<1	<1			
Dibromochloromethane	<1	<1	<1			
1,1,2-Trichloroethane	<1	<1	<1			
cis-1,3-Dichloropropene	<1	<1	<1			
2-Chloroethylvinylether	<1	<1	<1			
Bromoform	<1	<1	<1			
1,1,2,2-Tetrachloroethane	<1	<1	<1			
Tetrachloroethene	<1	<1	<1			
Chlorobenzene	<1	<1	<1			
Purgeable Aromatics (EPA 602)						
Benzene	<1	<1	<1			
Toluene	<1	<1	<1			
Ethylbenzene	<1	<1	<1			
Total Xylenes	<2	<2	<2			
Total Purgeable Hydrocarbons						
Tetrahydrofuran						
Methylethylketone						
(2-Butanone) (MEK)						
Methylisobutylketone (MIBK)						

* Same As III

ATTACHMENT 2

Metal Contents of Site Soils

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APPENDIX 2A
November 1985
METALS CONTENT OF SITE SOILS
MIDDLETOWN ROAD SITE

TOTAL METALS-ppm

	SS-1	SS-2	SS-3	SS-4	SS-5	SS-6
Arsenic	27.3	13.1	8.4	18.5	24.5	22.5
Barium	23.	21.	27.0	32.	5.0	28.
Cadmium	0.50	0.50	0.50	0.59	0.50	0.60
Cr-Total	216.	90.5	57.	134.	244.	243.
Copper	4.90	3.88	22.0	20.2	2.0	5.98
Iron	90,200	41,990	30,000	57,708	88,000	81,954
Lead	18.0	16.9	44.0	39.5	12.0	24.9
Magnesium	2,750	2,239	1,700	3,557	4,050	4,287
Potassium	8,500	6,975	3,000	6,522	12,500	8,375
Zinc	80.0	56.7	98.0	120.0	63.0	85.7
Mercury	0.1L	0.1L	0.1L	0.1L	0.1L	0.1L

June 4, 1985
METALS CONTENT OF SITE SOILS
MIDDLETOWN ROAD SITE
ppm BY DRY WEIGHT

Station Number	Arsenic	Cadmium	Chromium Total	Lead	Mercury	Copper	Iron	Nickel	Zinc	Aluminum	Barium	Selenium
SS-001	3.45	0.57	18.2	10.2	0.1	3.97	11,351	5.7	19.9	999	19.3	0.188
SS-002	9.50	0.52	39.3	11.4	0.1	6.40	23,967	6.2	16.1	22.211	14.5	0.35
SS-003	8.87	0.52	53.2	71.0	0.1	17.2	28,184	8.4	125	9,916	40.7	0.64
SS-004	10.5	0.51	66.5	21.5	0.1	8.90	30,675	8.2	77.7	10.481	25.6	0.51
SS-005	4.19	0.52	38.9	9.5	0.1	6.31	23,134	8.4	29.0	17.876	22.1	0.05
SS-006	6.46	0.51	54.3	58.4	0.1	29.3	30,738	9.2	107	10,246	38.9	0.62
SS-007	6.28	0.59	48.0	51.0	0.1	18.6	23,529	10.8	804	11,765	56.9	0.05
SS-008	20.3	0.50	244	10.0	0.1	2.69	101,695	13.0	59.8	11,715	10.0	0.35
SS-009	9.50	0.49	77.1	47.4	0.113	15.2	40,514	10.9	67.2	7,411	49.4	0.46
SS-010	21.6	0.50	219	10.0	0.1	3.58	101,493	13.9	75.6	13,433	5.0	0.05
SS-011	5.39	0.50	34.7	6.9	0.1	6.65	22,817	6.9	24.2	13,393	12.9	0.05
SS-012	9.27	0.50	93.1	36.7	0.1	19.1	46,535	9.9	73.3	8,416	31.7	0.05
SS-013	18.8	0.50	203	16.9	0.1	5.28	111,554	17.9	86.6	10,956	11.0	1.44
SS-014	9.40	0.49	132	37.5	0.1	8.29	55,281	12.8	79.0	9.131	32.6	0.05
SS-015	28.8	0.49	237	15.4	0.1	3.26	106,825	13.8	80.1	11,375	10.9	0.36
SS-016	11.8	0.50	84.3	17.8	0.1	4.07	71,429	7.9	103	5,952	50.6	0.05
SS-017	4.43	0.50	78.4	11.9	0.1	3.97	32,738	6.9	35.7	5,456	16.9	0.05
SS-018	6.31	0.50	60.7	7.0	0.1	1.69	41,791	5.0	54.7	3,383	11.9	0.05
SS-019	19.1	0.69	198	26.8	0.1	19.0	83,251	5.0	86.2	11,150	21.8	0.22
SS-020	5.17	0.50	22.8	12.9	0.1	6.63	16,238	8.9	34.6	10,644	22.8	0.18

APPENDIX 2D
June 4, 1985
ORGANICS CONTENT OF SITE SOILS
MIDDLETOWN ROAD SITE
ppm BY DRY WEIGHT

Station Number	Methylene Chloride	MEK	MIBK	PCB 1260
SS-001	34	112	150	--
SS-002	30	22	35	--
SS-003	20	--	--	--
SS-004	24	--	12	--
SS-005	23	--	18	0.2
SS-006	44	--	10	--
SS-009	--	--	--	0.2

State of Maryland Department
of Health and Mental Hygiene
301-383-2618

FOR FURTHER INFORMATION CONTACT: John W. Koontz 301/383-6650
Robert Chadwick 215/597-6728

85 W-6

May 1, 1985

"SUPERFUND" SITE TO BE STUDIED

For Immediate Release:

The State of Maryland, Department of Health and Mental Hygiene's Office of Environmental Programs, Waste Management Administration, and the United States Environmental Protection Agency (EPA), have begun a study to determine whether a "Superfund" site on Middletown Road in Anne Arundel County can be removed from EPA's National Priority List of hazardous waste sites. A public meeting to discuss this project will be held on Monday, May 13, 1985 at 7:00 p.m., at the Broadneck Senior High School on College Parkway, Arnold, Maryland.

The Middletown Road Dump operated for many years, primarily for the disposal of rubble and construction debris. In 1982, the site was placed on the National Priority list after approximately forty (40) drums and four dumpster loads of suspected hazardous materials were found on it. In 1983, $384,000 were allocated under "Superfund" for immediate action to remove contaminated soil, drums and other containers, and to take grading and erosion control measures to stablize the site.

During this emergency phase of the project, six monitoring wells were installed around the perimeter of the site. Sampling of these wells, since July, 1983, has not detected any degradation of groundwater.

Under the delisting project, these six wells, plus three domestic wells and three surface water sites, will be sampled and analyzed for a wide range of constituents. In addition, 20 samples will be taken from soil overlying the site to determine if there is any residual contamination from materials removed from the site.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
841 Chestnut Building
Philadelphia, Pennsylvania 19107

SUBJECT: Need for public meetings during NPL site delisting process

DATE: FEB 05 1986

FROM: Ann Cardinal (3PA00)
Office of Public Affairs

TO: Lorna Schull (3HW21)
Site Response Section

In response to your questions on the need for a public meeting prior to recommending delisting of the Middletown Road site in Annapolis, Maryland, I do not believe a meeting is necessary at this time. A public meeting was scheduled and a press advisory released, following the completion of the RI/FS. Not only did no one -- not even press -- attend the meeting, but we received no telephone or written comments on the study.

Prior to the publishing in the Federal Register of the intent to delist the Middletown Road site, we should issue a press release announcing our intent, the availability of the information package in a local respository, and an offer for a meeting if the public requests one. This release will also announce a 3-week public comment period.

Further, following the publication of the delisting in the Federal Register, there is a 60-day comment period during which time we can hold a meeting if the public requests one. This publication will be announced to the local residents through a press release.

With the two upcoming comment periods and the offer to hold a public meeting, I do not see a need for a public meeting at this point in time.

ATTACHMENT 6

Operation and Maintenance

State of Maryland

OFFICE OF ENVIRONMENTAL PROGRAMS
DEPARTMENT OF HEALTH AND MENTAL HYGIENE

201 WEST PRESTON STREET • BALTIMORE, MARYLAND 21201 • AREA CODE 301 • 383-

TTY FOR DEAF: Balto. Area 383-7555
D.C. Metro 565-0451

Adele Wilzack, R.N., M.S., Secretary

William M. Eichbaum, Assistant Secretary

September 20, 1985

Mr. Stephen R. Wassersug, Director
Air, & Waste Management Division
Environmental Protection Agency
Region III
841 Chestnut Building
Philadelphia, Pennsylvania 19107

Dear Mr. Wassersug:

As discussed between our staffs on September 11, 1985, the Middletown Road Dump is presently part of the State's solid waste ground water monitoring program. The State will continue to monitor at the Middletown Road Dump and provide your office with a copy of the sample results in a timely manner. The frequency of such monitoring and length of that monitoring will be dependent on the results of the monitoring and a finite period can not be specified at this time.

If I can be of any further assistance, please feel free to call me at (301) 225-5647.

Sincerely,

Ronald Nelson, Director
Waste Management Administration

RN/dlf

cc: Mr. John W. Koontz
Mr. Frank Henderson

ATTACHMENT V

Community Relations

MIDDLETOWN ROAD HAZARDOUS WASTE SITE
FACT SHEET
December 15, 1983

PHASE II.

On July 27, 1983, several partially exposed drums were discovered on the western edge of the site, ten feet from a massive pile of tires stored on the site. This find led officials to suspect that more drums could be buried on site.

Because of the possibility of burried drums, the owner of the approximatly one million tires was requested to remove them by October 14, 1983. This deadline was not met, therefore, Superfund monies were utilized to relocate the tires beyond the edge of the suspected drum area. This was accomplished by october 14, 1983.

A subsurface metal detection survey was performed and compleated on October 18, 1983. Results indicated the presence of subsurface deposites of metal in several locations. This investigation combined with historical areal photographs of the site led to several areas of suspected drum burial. Excavation of these areas revealed a number of 55 gal. drums, 5 gal. pails, fiberboard containers and composite sacks containing hazardous materials. Total excavated durring this phase of the project are as follows;

159 Drums
115 empty
44 full

275 5-gal pails
224 empty
51 full

Sample annalysis preformed on the materials found in the drums pails and contaminated soils indicate that the following hazardous materials were disposed of on site;

a. lead
b. chromium
c. zinc
d. phenolic compounds, including;
   1. 2,4,6- Trichlorophenol
   2. N- Nitrosodiphenylamine
e. chlorinated and base neutral compounds;
   1. Ethylbenzene
   2. acrolein
   3. chlorobenzene
   4. 1,2,-dichloropropane
   5. toluene
   6. 2- propen-1-ol (allyl alcohol)
   7. 3,3-oxybis-1-propene (allyl ether)
   8. 1,3-dichloro-2-propanol
   9. 3-chloro-1,2-propanediol
   10. 1,2,3-propanetriol
   11. 2-hydroxyethyl ester

1

Middletown Road Responsiveness Summary

A public meeting was called on August 27, 1985 at 7 p.m. to discuss the deletion of the Middletown Road Superfund Site from the National Priorities List and to accept comment from the public on the proposed action. The only meeting attendees were two Maryland Department of Health and Mental Hygiene and two Environmental Protection Agency - Region III staff. No written or verbal comments from the public were received on the proposed action.

Attached are fact sheets from previous public meetings.

Activity to Date:

PHASE I

On June 25, 1983 up to $384,000 was allocated under the Superfund Program for the immediate removal of soil contaminated by heavy metals and approximately 90 paint pails found on the site, located on Middletown Road, on the Broadneck Penninsula in Anne Arundel County.

The heavy metals, constituents of marine paint, were spread over approximately one acre on the northern end of the site. The marine paints came from 55 gallon drums which were crushed, spreading the contents on the soil.

Contaminated soil was sampled to determine the extent of contamination. Once this was determined, soil was scraped and placed in a staging area to prepare for transport to a hazardous waste facility. The sampling and scraping operation continued until uncontaminated soil was reached.

At the same time, the pails containing various marine paints and thinners were consolidated into six 55 gallon drums. These drums were sampled and staged in preparation for transport and disposal off site.

Approximately 350 cubic yards of contaminated soil were transported to the Hawkins Point Hazardous Waste Landfill near Baltimore for disposal. The six drums of paint waste were transported to an out-of-state facility.

Other actions on the site included constructing sediment and erosion controls and installing a filter fence in a stream which runs through the property to prevent runoff of contaminants. Six groundwater monitoring wells were drilled around the site.

PHASE II

On July 27, 1983, several partially exposed drums were discovered on the western edge of the landfill, ten feet from a massive pile of tires stored on the site. This find led officials to suspect that more drums could be buried on site.

Because of the possiblity of buried drums, the owner of the approximately one million tires was requested to remove them by October 1, 1983.

This deadline was not met; therefore, superfund monies were utilized to relocate tires beyond the edge of the suspected drum area. This was completed by October 14, 1983.

FACT SHEET

MIDDLETOWN ROAD SITE

DELISTING PROJECT

Aug.26,1985

The Maryland Office of Environmental Programs, Department of Health and Mental Hygiene is undertaking a Remedial Study of the Middletown Road "CERCLA" Emergency Project Site in Anne Arundel County. The purpose of this investigation is to develop the documentation needed to delete the site from the National Priority List. In June 1983, hazardous wastes from this site were removed under the immediate phase of CERCLA. (Superfund)

Environmental Sampling

During the emergency phase of the project, six ground water monitoring wells were installed encircling the site perimeter. Sampling of these wells was initiated in July of 1983 and has continued on a quarterly basis. To date, no ground water degradation has been detected.

Under the project to remove the site from the National Priority List, six wells, three domestic wells and three stream sites will be sampled four times beginning March 27, 1985. The last scheduled sampling is scheduled for the week of July 29, 1985. All water samples will be analyzed for Standard Inorganic Parameters, Priority Metals, and Volatile Organic Contaminants.

In addition to the water quality monitoring, samples will be taken of the soils overlaying the site, to determine if there is any residual contamination from the materials removed from the site during the Emergency Project. These samples will be obtained from 20 points taken from random points within a grid layed out over the site. Soil sampling is scheduled for the first week of May.

Site Background and History

The Middletown Road Dump is a landfill located off Maryland Route #50 near Annapolis, Anne Arundel County. This location has been operating as a dump, primarily for rubble and construction debris for several decades without proper State permits. In 1981, it was discovered that approximately 40 drums and four dumpster loads of suspected hazardous materials were on the site. In December of 1982, this site was placed on EPA's National Priority List for clean-up under the Superfund Remedial Program.

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Chart I

Results of Soil Sampling Survey

June 1983

June 28, 1983

Station	Lead	Chromium
01	10	66
02	19	97
03	16	49
04	21	162
05	29	144
06	318	146
07	340	124
08	22	175
09	12	50
10	137	112
11	8	95
12	31	170
13	18	124
14	75	94
15	< 5	162
June 29, 1983		
16	< 5	101
17	7	139
18	12	57
19	< 5	29
20	11	98
21	12	71
22	13	100
23	< 5	27
24	5	107
25	< 5	95

Results of Soil Sampling Survey
June 1983

June 29, 1983

Station	Lead	Chromium
26	36	79
27	6	130
28	7	123
29	19	45
30	6	34
31	8	84
32	20	70
33	66	72
34	< 5	76
35	18	85
36	26	113
37	< 5	110

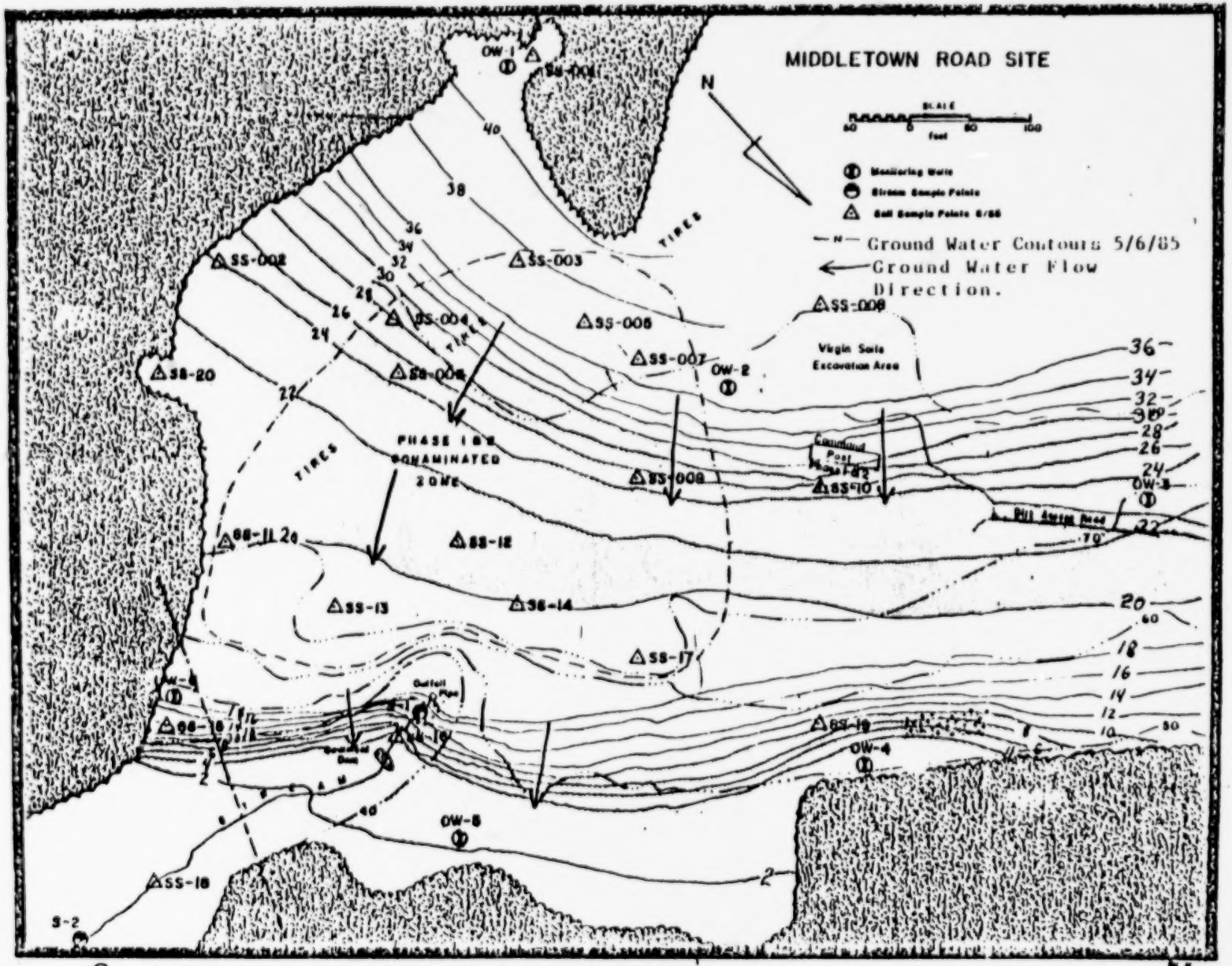


FIGURE B. Ground Water Contours at the Middletown Road Site.

ATTACHMENT III

Results of Air Monitoring on 11/03/83 and 6/28/85

STATE OF MARYLAND • DEPARTMENT OF HEALTH AND MENTAL HYGIENE

MEMORANDUM

Copies {

mse

TO Mark Cox, Waste Management Administration **From** Walter W. Cooney, Air Management Administration **Date** 11/03/83

Subject Analysis of Landfill Air Samples Collected 11/02/83

One tedlar bag sample was collected on the morning of November 2, 1983 at the Middletown Road site. This bag was analyzed in our Mobile Air Monitoring Laboratory on the afternoon of November 2, 1983 and repeated in the morning of November 3, 1983.

Here are the results of this analysis:

Compound	PPB (v/v)
Methylene Chloride	10.0
1,1 Dichloroethane	1.4
Chloroform	0.5
1,1,1 Trichloroethane	4.3
Carbon Tetrachloride	2.9
1,1,2 Trichloroethane	0.1
1,2 Dichloropropane	0.07
Trichloroethylene	0.6
Perchloroethylene (Tetrachloroethene)	1.3
Freon 12 & VCM	17.0
Pentane	approx. 10
Toluene	12
Xylene	approx. 15
Ethylbenzene	approx. 4
Benzene	2.8

In addition to these confirmed compounds, there were 5 unidentified chlorinated compounds which fall in the range of less than 1 ppb to 20-25 ppb. There were a large number of unidentified peaks on the FID detector but they are all less than 1 ppb except for one large peak early in the run which could be a combination of light hydrocarbons.

WWC:cw

RECEIVED
NOV 22 1983

RESULTS OF AIR MONITORING

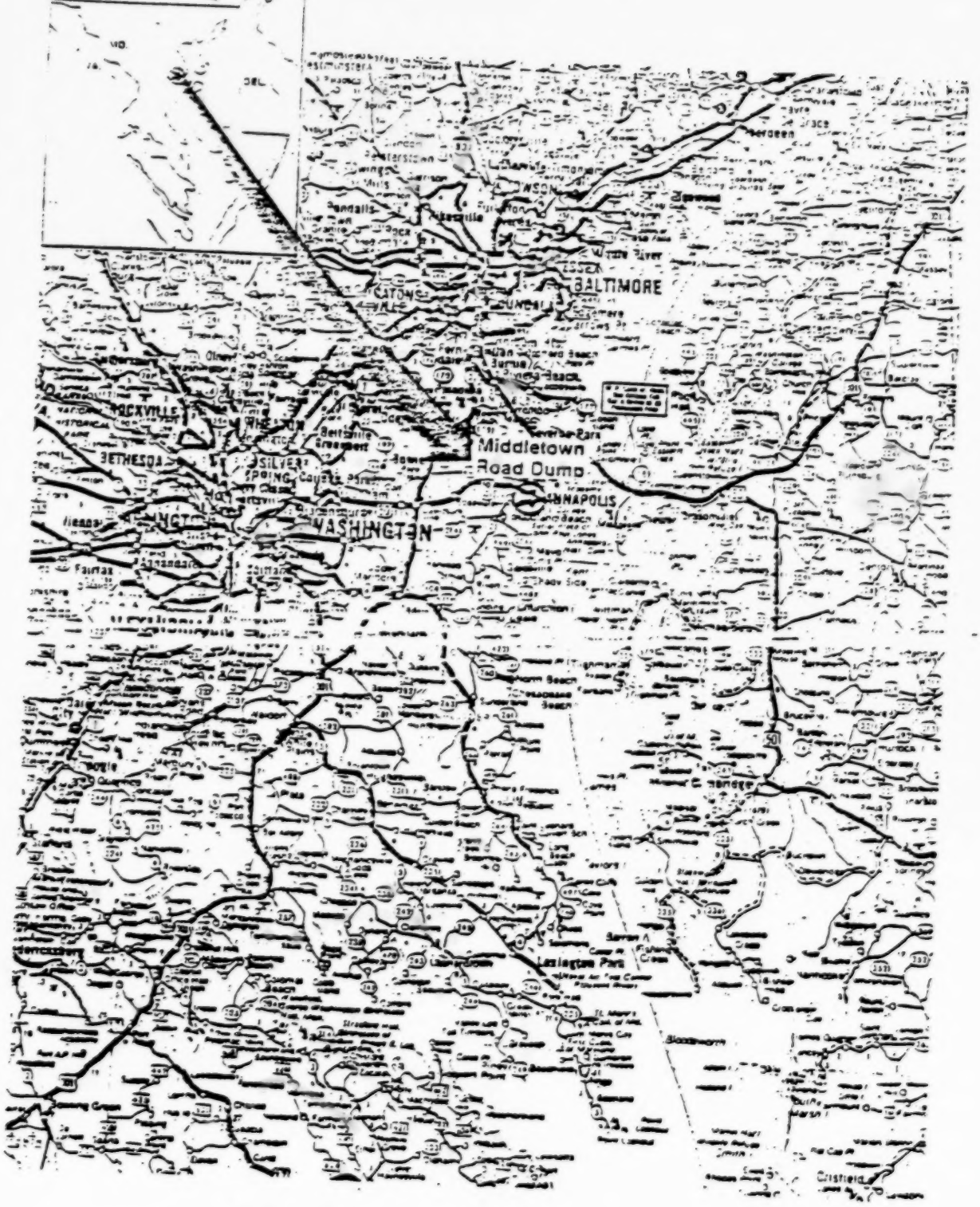
JUNE 28th 1985

MIDDLETOWN ROAD SITE PROJECT

STATION	CONCENTRATION
BACKGROUND	1.5 as Benzene ppm
AS-1	1.6 "
AS-2	1.4 "
AS-3	1.5 "
AS-4	1.6 "
AS-5	1.5 "
TRANSECT A	no excursions above background (± 0.2 ppm)
TRANSECT B	"
TRANSECT C	"
TRANSECT D	"

ATTACHMENT IV

Middletown Road Site Map



Immediate removal actions, site location map.
Middletown Road Dump, Annapolis, MD.

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